ABSTRACT

A DC-DC converter of synchronous rectification type is provided which comprises: a current detector (51) for discerning electric current (I_{Q1}, I_{Q2}) flowing through a primary side circuit; first and second DC biasing power supplies (53, 54) for producing a bias voltage (V_{BS1}, V_{BS2}) higher than voltage corresponding to excitation current through transformer (4); and first and second comparators (55, 57) for activating first and second rectifying MOS-FET (7, 8) when current detector (51) produces the detection voltage (V_{DT}) over bias voltage (V_{BS1}, V_{BS2}) of first and second DC biasing power supplies (53, 54). As each of first and second rectifying MOS-FETs (7, 8) in secondary side circuit is driven synchronously with electric current (I_{Q1}, I_{Q2}) flowing through the primary side circuit except excitation current component through transformer (4), the converter can minimize switching loss in each rectifying MOS-FET (7, 8) in secondary side circuit to improve conversion efficiency.